



5-year warranty



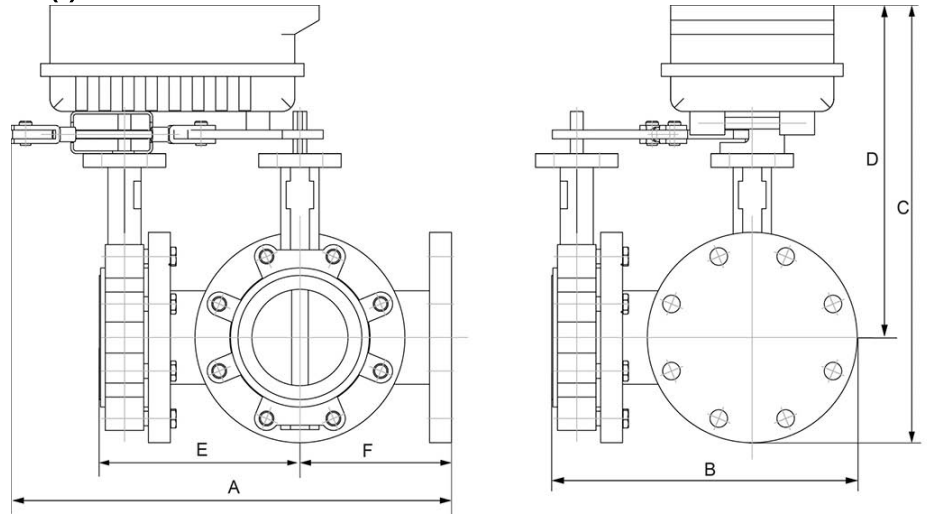
Technical data

<b>Functional data</b>	Valve Size	4" [100]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	-22...250°F [-30...120°C]
	Body Pressure Rating	ANSI Class Consistent with 125, 232 psi CWP
	Close-off pressure Δps	200 psi
	Servicing	maintenance-free
	Rangeability Sv	10:1 (for 30...70° range)
	Flow Pattern	3-way Mixing/Diverting
	Leakage rate	0%
	Controllable flow range	90° rotation
	Cv	600
	ANSI Class	Consistent with 125
	Body pressure rating note	232 psi CWP
	Maximum Velocity	12 FPS
	Lug threads	5/8-11 UNC
<b>Materials</b>	Valve body	Ductile cast iron ASTM A536
	Body finish	epoxy powder coating (blue RAL 5002)
	Seat	EPDM
	End fitting	for use with ANSI class 125/150 flanges
	Bearing	RPTFE
	Disc	304 stainless steel
	Gear operator materials	Gears - hardened steel
<b>Suitable actuators</b>	Non-Spring	PRB(X)
	Electronic fail-safe	PKRB(X)

Dimensions

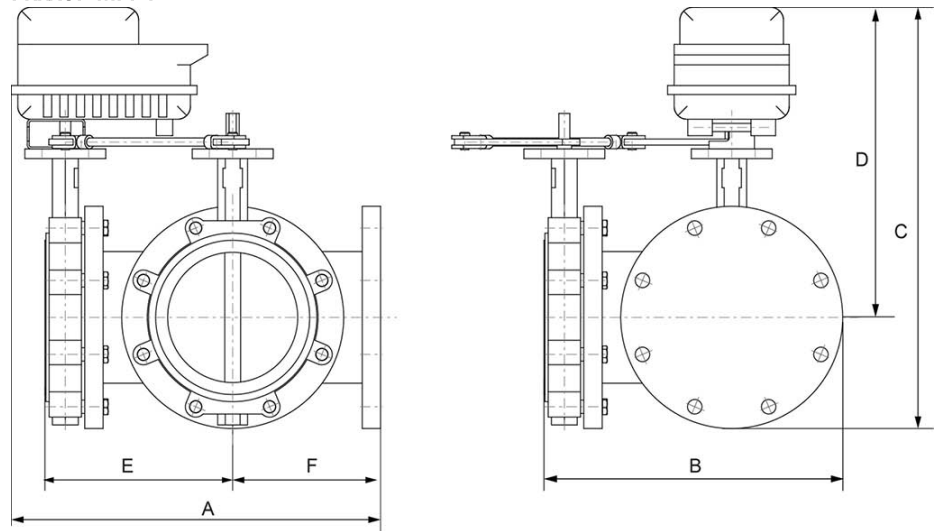
Dimensional drawings

PRB(X)



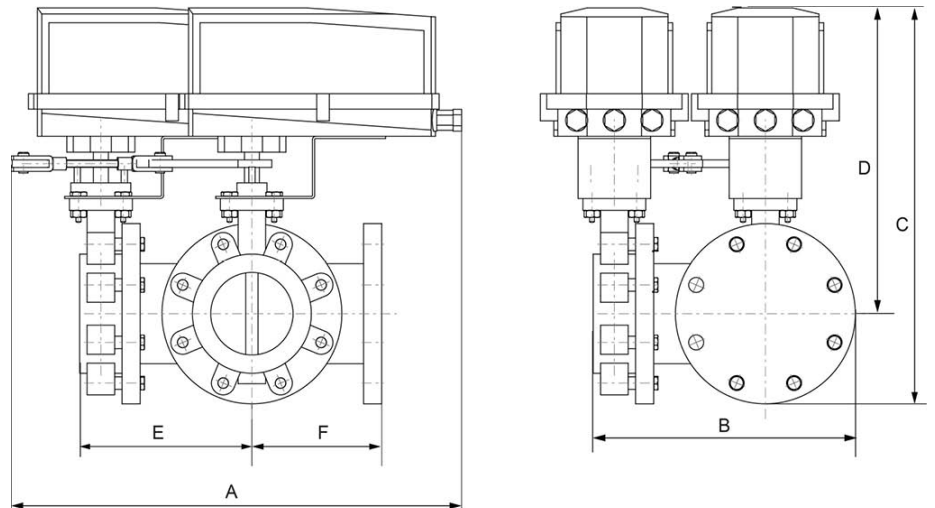
A	B	C	D	E	F	Number of Bolt Holes
18.9" [480]	13.1" [332]	18.7" [476]	14.2" [361]	8.6" [218]	6.5" [165]	8

PKRXUP-MFT-T



A	B	C	D	E	F	Number of Bolt Holes
18.9" [480]	13.1" [332]	21.0" [533]	16.6" [421]	8.6" [218]	6.5" [165]	8

2\*GMCX24-3-T-X1 N4



<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>Number of Bolt Holes</b>
22.5" [571]	13.3" [337]	21.7" [550]	17.4" [441]	8.6" [218]	6.5" [165]	8



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## Technical data

<b>Electrical data</b>	Nominal voltage	AC 24...240 V / DC 24...125 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	52 W
	Power consumption in rest position	9 W
	Transformer sizing	55 VA @ AC/DC 24 V (class 2 power source), 43 VA @ AC/DC 120 V, 68 VA @ AC 230 V
	Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, one set at 10°, one adjustable 0...90°
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
	Electrical Connection	Terminal blocks, (PE) Ground-Screw
	Overload Protection	electronic throughout 0...90° rotation
	<b>Functional data</b>	Communicative control
Operating range Y		2...10 V
Operating range Y note		4...20 mA
Input Impedance		100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for On/Off
Operating range Y variable		Start point 0.5...30 V End point 2.5...32 V
Options positioning signal		variable (VDC, on/off, floating point)
Position feedback U		2...10 V
Position Feedback		2...10 V, Max. 0.5 mA, VDC variable
Position feedback U note		Max. 0.5 mA
Position feedback U variable		VDC variable
Setting Fail-Safe Position		adjustable with Belimo Assistant App 0...100% (default 0%)
Bridging time		programmable 0...10 s (2 s default) delay before fail-safe activates
Pre-charging time		5...20 s
Direction of motion motor		reversible with app
Direction of motion fail-safe		reversible with app
Manual override		7 mm hex crank, supplied
Angle of rotation		90°
Running Time (Motor)		default 35 s, variable 30...120 s
Running time motor variable		30...120 s
Running time fail-safe		<30 s
Noise level, motor	68 dB(A)	
Noise level, fail-safe	62 dB(A)	
Position indication	top mounted domed indicator	
Passive sensor inputs	2x (Pt1000, Ni1000, NTC10k2)	

<b>Safety data</b>	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Enclosure	UL Enclosure Type 4X
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
	Quality Standard	ISO 9001
	Ambient temperature	-22...122°F [-30...50°C]
	Ambient humidity	max. 95% r.H., non-condensing
	Servicing	maintenance-free
<b>Weight</b>	Weight	14 lb [6.4 kg]
<b>Materials</b>	Housing material	Die cast aluminium and plastic casing





**Product features**





<b>Default/Configuration</b>	Default parameters for DC 2...10 V applications of the PKR...MFT actuator are assigned during manufacturing. If required, different parameters of the actuator can be ordered. These parameters are variable and can be modified by factory pre-set, the handheld ZTH US or using the Belimo App on a smart phone with Near Field Communications (NFC) programming.
<b>Application</b>	PR Series valve actuators are designed with an integrated linkage and visual position indicators. For outdoor applications, the installed valve must be mounted with the actuator at or above horizontal. For indoor applications the actuator can be in any location including directly under the valve.
<b>Operation</b>	The PR series actuator provides 90° of rotation and a visual indicator shows the position of the valve. The PR Series actuator uses a low power consumption brushless DC motor and is electronically protected against overload. A universal power supply is furnished to connect supply voltage in the range of AC 24...240 V and DC 24...125 V. Included is a smart heater with thermostat to eliminate condensation. Two auxiliary switches are provided; one set at 10° open and the other is field adjustable. Running time is field adjustable from 30...120 seconds by using the Near Field Communication (NFC) app and a smart phone. †Use 60°C/75°C copper wire size range 12...28 AWG, stranded or solid. Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 4000 V. Type of action 1. Control pollution degree 3.
<b>Factory settings</b>	Default parameters for DC 2...10 V applications of the PKR...MFT actuator are assigned during manufacturing. If required, different parameters of the actuator can be ordered. These parameters are variable and can be modified by factory pre-set, the handheld ZTH US or using the Belimo App on a smart phone with Near Field Communications (NFC) programming.

**Accessories**

Gateways	Description	Type
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to LonWorks	UK24LON
	Gateway MP to Modbus RTU	UK24MOD
Service tools	Description	Type
	Connection cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service Tool, with ZIP-USB function, for parametrisable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

**Electrical installation**

-  Meets cULus requirements without the need of an electrical ground connection.
-  Universal Power Supply (UP) models can be supplied with 24 V up to 240 V.
-  Disconnect power.
-  Provide overload protection and disconnect as required.

-  Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
-  Only connect common to negative (-) leg of control circuits.
-  Actuators may be controlled in parallel. Current draw and input impedance must be observed.
-  **Warning! Live Electrical Components!**  
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

